

Work Order ID 118881

May-06-14 9:50:42 AM

\*118881\*

Page 1

Item ID: D350-748-201

Accept

\*N900040100\*

Setup

Start

\*NS1\*

Revision ID:

Item Name: Aft Crosstube

Stop

\*NS2\*

Start Date: 5/20/14

Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 5/20/14

Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals:

Process Plan: ML3

Date: 14-05-06

Tooling:

Date:

Run

Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

Draw Nbr

Revision Nbr

D350-748-241

G

100

Document Control

0.00

DAS

\*100\*

DOCUMENT CONTROL

27

DC

0.00

3-89

Doc.Control -USB or Paperwork

Memo

Photocopy bluefile & type labels per PPPD350-748-201

CHG003

FEB 25 2015

110

0.00

\*110\*

BENDING MACHINE - CROSSTUBES

CNC Bend 2

Memo

0.00

CNC Alpha 160 Bender

Bend tube as per Dwg D350-748-241 using CNC bender program D350A and

Folio FT

\*\*\*\*\*UNDER BEND .225" PER SIDE\*\*\*\*\*

\*\*\*\*\*USE (4) DT9824 SHIM BLOC TO CHECK STRAIGHTNESS\*\*\*\*\*

TW 14-11-06

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Page 2

Item ID: D350-748-201

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Aft Crosstube

Start Date: 5/20/14 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 5/20/14 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

120

0.00

\*120\*

Crosstubes

Memo

0.00

Crosstubes

\*\*\*VERIFY CROSSTUBE DIMENSIONS AS PER DWG\*\*\*

TH 14-11-06

125

0.00

\*125\*

Outsource1

Memo

0.00

Outsource process - Heat Treat

ISSUE P/O TO METCOR: 26406

\*\*\*Stress relief\*\*\*

Heat treat crosstube as per QSI010 4.3 within 12h after bending

CL 14/11/07

126

Receive &amp; Inspect for Damage &amp; Mat'l Certs

0.00

\*126\*

Packaging

Memo

0.00

Packaging

1x SP 14-11-11

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Page 3

Item ID: D350-748-201

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Item Name: Aft Crosstube

Stop

\*NS2\*

Start Date: 5/20/14

Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 5/20/14

Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

127

QC15- Crosstube Dimensional Check

0.00

\*127\*

QC

Memo

0.00

Quality Control

\*\*\*MARK CUT LINES\*\*\*

①

14-11-27

PD/DP

128

0.00

\*128\*

Crosstubes

Memo

0.00

Crosstubes

CUT TUBE AT HEIGHT ON FAI SHEET

VERF HEIGHT 31.57 BY QC 15 LEVEL INSPECTOR

VERF TWIST 0.040 BY QC 15 LEVEL INSPECTOR

14-12-2  
DAS  
9  
9-88

# Work Order ID 118881

May-06-14 9:50:42 AM

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Item ID: D350-748-201

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Item Name: Aft Crosstube

Stop **\*NS2\***

Start Date: 5/20/14 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 5/20/14 Req'd Qty: 1.00 **\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                                                                            | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|-----------------------------------------------------------------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 130                            | Crosstubes                                                                                          | 0.00                 |         |        |              | BC            | 14/12/02      |                  |                |
| <b>*130*</b>                   |                                                                                                     |                      |         |        |              |               |               |                  |                |
| Crosstubes                     | Memo                                                                                                | 0.00                 |         |        |              |               |               |                  |                |
| Crosstubes                     | 2- Drill Tube as per Dwg D350-748-241 Using DT8876 Drill Jigs,<br>Set-up drill table as per QSI 010 |                      |         |        |              |               |               |                  |                |
|                                | 3 -Deburr                                                                                           |                      |         |        |              |               |               |                  |                |
|                                | 4- Engrave Part # and Batch # as per Dwg D350-748-241                                               |                      |         |        |              |               |               |                  |                |
|                                | 5-Remove all marks from tube within limits of D350-748-241                                          |                      |         |        |              | BC            | 14/12/05      |                  |                |
| 140                            | QC6- Inspect dimensions to drawing                                                                  | 0.00                 |         |        |              | 1             |               |                  |                |
| <b>*140*</b>                   |                                                                                                     |                      |         |        |              |               |               |                  |                |
| QC                             | Memo                                                                                                | 0.00                 |         |        |              |               |               |                  |                |
| Quality Control                |                                                                                                     |                      |         |        |              |               |               |                  |                |

DAS-  
38  
9-89

DEC 09 2014

# Work Order ID 118881

May-06-14 9:50:42 AM

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Item ID: D350-748-201 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Aft Crosstube  
Start Date: 5/20/14 Start Qty: 1.00 **\*1\*** Cust Item ID:  
Required Date: 5/20/14 Req'd Qty: 1.00 **\*1\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

|     |                                               |      |  |  |  |  |  |  |  |
|-----|-----------------------------------------------|------|--|--|--|--|--|--|--|
| 150 | Outsource process-Cadplate per QSI017 4.1.9.1 | 0.00 |  |  |  |  |  |  |  |
|-----|-----------------------------------------------|------|--|--|--|--|--|--|--|

**\*150\***

|            |      |      |  |  |  |  |  |  |  |
|------------|------|------|--|--|--|--|--|--|--|
| Outsource3 | Memo | 0.00 |  |  |  |  |  |  |  |
|------------|------|------|--|--|--|--|--|--|--|

Outsource process - Cad plate

Issue P/O: 26894  
Stress relief at 375° for 5 hours  
Magnetic Particle Inspect per ASTM E1444  
Cadium Plate per AMS-QQ-P-416B, Class 1, Type 2  
Embrittle relief at 375° for 8 hours, Chromate Treat  
Possible Supplier: Southwest United Industries  
Ensure Certificate of Conformity is attached

CL 14/12/23 ①

|     |                                            |      |  |  |  |  |  |  |  |
|-----|--------------------------------------------|------|--|--|--|--|--|--|--|
| 160 | Receive & Inspect for Damage & Mat'l Certs | 0.00 |  |  |  |  |  |  |  |
|-----|--------------------------------------------|------|--|--|--|--|--|--|--|

**\*160\***

|           |      |      |  |  |  |  |  |  |  |
|-----------|------|------|--|--|--|--|--|--|--|
| Packaging | Memo | 0.00 |  |  |  |  |  |  |  |
|-----------|------|------|--|--|--|--|--|--|--|

Packaging

Ensure certificate of conformity is attached

IX SP15-02-10

|     |                                               |      |  |  |  |  |  |  |  |
|-----|-----------------------------------------------|------|--|--|--|--|--|--|--|
| 170 | QC5- Inspect part completeness to step on W/O | 0.00 |  |  |  |  |  |  |  |
|-----|-----------------------------------------------|------|--|--|--|--|--|--|--|

**\*170\***

|    |      |      |  |  |  |  |  |  |  |
|----|------|------|--|--|--|--|--|--|--|
| QC | Memo | 0.00 |  |  |  |  |  |  |  |
|----|------|------|--|--|--|--|--|--|--|

Quality Control

DAS  
38  
9-89

1 15-02-10

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Item ID: D350-748-201

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Aft Crosstube

Start Date: 5/20/14 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 5/20/14 Req'd Qty: 1.00 **\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

|     |                                        |      |  |  |  |  |  |  |  |
|-----|----------------------------------------|------|--|--|--|--|--|--|--|
| 174 | Outsource process - NDT per QSI038 4.1 | 0.00 |  |  |  |  |  |  |  |
|-----|----------------------------------------|------|--|--|--|--|--|--|--|

**\*174\***

Outsource2

Memo 0.00

Outsource process - NDT

ISSUE P/O TO ACCUREN: 27400CD 15/02/12 ①

|     |                                            |      |  |  |  |  |  |  |  |
|-----|--------------------------------------------|------|--|--|--|--|--|--|--|
| 176 | Receive & Inspect for Damage & Mat'l Certs | 0.00 |  |  |  |  |  |  |  |
|-----|--------------------------------------------|------|--|--|--|--|--|--|--|

**\*176\***

Packaging

Memo 0.00

Packaging

IX 8015-02-12

|     |                                               |      |  |  |  |  |  |  |  |
|-----|-----------------------------------------------|------|--|--|--|--|--|--|--|
| 178 | QC5- Inspect part completeness to step on W/O | 0.00 |  |  |  |  |  |  |  |
|-----|-----------------------------------------------|------|--|--|--|--|--|--|--|

**\*178\***

QC

Memo 0.00

Quality Control

|   |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|
| 1 |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|

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9-89  
15-02-12

Work Order ID 118881

May-06-14 9:50:42 AM

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Item ID: D350-748-201

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Aft Crosstube

Start Date: 5/20/14 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 5/20/14 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

180

0.00

\*180\*

SprayPaint

SprayPaint

Memo

0.00

Spray Painting

1-Prime inside crosstube as per QSI 005 4.2

BATCH: 129807

2-Paint Outside of Tube as per Dart QSI 005 4.2

BATCH: 131253

\* Paint changed names from Dupont to ~~ATLANTA~~ ATLANTA  
Sinterlab (Tech. Data sheet Attached)

190

QC14- Inspect Spray Paint

0.00

\*190\*

QC

Memo

0.00

Quality Control

Then, Wrap in plastic bag to protect from scratches

DAS  
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9-89

15-02-23





# Work Order ID 118881

**\*118881\***

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May-06-14 9:50:42 AM

Item ID: D350-748-201 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Aft Crosstube  
 Start Date: 5/20/14 Start Qty: 1.00 **\*1\*** Cust Item ID:  
 Required Date: 5/20/14 Req'd Qty: 1.00 **\*1\*** Customer:  
 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

| Sequence ID/<br>Work Center ID | Operation<br>Description                              | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty     | Reject<br>Qty     | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|-------------------------------------------------------|----------------------|---------|--------|--------------|-------------------|-------------------|------------------|----------------|
| 220                            | Pick Kit                                              | 0.00                 |         |        |              |                   |                   |                  |                |
| <b>*220*</b>                   |                                                       |                      |         |        |              | DAS<br>66<br>9-89 |                   | FEB 24 2015      |                |
| Packaging                      | Memo                                                  | 0.00                 |         |        |              |                   |                   |                  |                |
| Packaging                      |                                                       |                      |         |        |              |                   | DAS<br>28<br>9-89 |                  |                |
| 230                            | QC4- 100% Inspect kits for completeness               | 0.00                 |         |        |              |                   |                   |                  |                |
| <b>*230*</b>                   |                                                       |                      |         |        |              | DAS<br>27<br>9-89 |                   | FEB 25 2015      |                |
| QC                             | Memo                                                  | 0.00                 |         |        |              |                   |                   |                  |                |
| Quality Control                |                                                       |                      |         |        |              |                   |                   |                  |                |
| 240                            | Packaging                                             | 0.00                 |         |        |              |                   |                   |                  |                |
| <b>*240*</b>                   |                                                       |                      |         |        |              | 1X                | DAS<br>28<br>9-89 | FEB 24 2015      |                |
| Packaging                      | Memo                                                  | 0.00                 |         |        |              |                   |                   |                  |                |
| Packaging                      | Identify and pack for shipping as per PPPD350-748-201 |                      |         |        |              |                   |                   |                  |                |
|                                | Location: <u>FG 35</u>                                |                      |         |        |              |                   |                   |                  |                |
|                                | PPP Rev: <u>FL</u>                                    |                      |         |        |              |                   |                   |                  |                |

Work Order ID 118881

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May-06-14 9:50:42 AM

Item ID: D350-748-201

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Aft Crosstube

Start Date: 5/20/14 Start Qty: 1.00

\*1\*

Cust Item ID:

Required Date: 5/20/14 Req'd Qty: 1.00

\*1\*

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

250

QC21- Final Inspection - Work Order Release

0.00

\*250\*

QC

Memo

0.00

Quality Control

MJ 15-02-27

MJ 15-2-27

# Picklist Print

May-06-14 8:05:56 AM

Page 1

Work Order ID: 118881

**\*118881\***

Parent Item: D350-748-201

**\*D350-748-201\***

Parent Item Name: Aft Crosstube

Start Date: 5/20/14

Required Date: 5/20/14

Start Qty: 1.00

Required Qty: 1.00

## Comments:

IPP Rev: A New Issue 06-07-05 JLM  
 IPP Rev: B Update qty of MS21042L5 06-09-12 KJ  
 IPP Rev C Combined manufacturing 08.04.02 EC verified by: DD  
 IPP Rev:D 08-06-24 revD as per dwg DD verified by:EC  
 IPP Rev: E 08.12.11 Step17 was step 21 KJ Verified by:EC IPP Rev:F  
 10.08.04 added QSI010 4.3 DD verf:EC IPP REV:G ADD  
 UNDER BEND COMMENT 12-05-28 JLM IPP REV:H 12.11.05 as per  
 dwg D350-748-141G DD verf:JLM

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|

|               |                |           |    |  |  |     |      |           |   |   |  |                   |         |
|---------------|----------------|-----------|----|--|--|-----|------|-----------|---|---|--|-------------------|---------|
| ALS4-1032-225 | AELS8-1032-225 | Purchased | No |  |  | 200 | Each | 1,042.000 | 1 | 1 |  | DAS<br>41<br>9-89 | 15-2-18 |
|---------------|----------------|-----------|----|--|--|-----|------|-----------|---|---|--|-------------------|---------|

**\*AI S4-1032-225\***

Rivnut

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| FG       | 30      |          |
| M127028  | 30      |          |
| FP001    | 710     |          |
| M128649  | 710     |          |
| ST280    | 276     |          |
| M127028  | 10      |          |
| M128179  | 266     |          |
| st555    | 26      |          |
| M127092  | 26      |          |

AN4-41A

Purchased

No

220

Each

616.0000

8

8

**\*AN4-41A\***

Bolt

| Location | Loc Qty | Loc Code |
|----------|---------|----------|
| ST517    | 616     |          |
| 124241   | 44      |          |
| 124805   | 387     |          |
| 124836   | 185     |          |

DAS  
27  
9-89

**\*\*** 130729

DAS  
66  
9-89

FEB 24 2015

DAS  
28  
9-89

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |      |      |     | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                   | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |             |              |              |  |  |
|--------------------------------------------------------------|------|------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------|--------------|--|--|
| Root Cause                                                   | Date | Step | Qty | Description of work order update or non-conformance                                                                                                                                | Initial Chief Eng | Action Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Sign & Date | Verification | QC Inspector |  |  |
| Design                                                       |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Doc/Data                                                     |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Equip/Tooling                                                |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Handling/Pre                                                 |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Material                                                     |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Operator                                                     |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Offset/Setup                                                 |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Process                                                      |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Supplier                                                     |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Training                                                     |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Transport                                                    |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |
| Unapproved                                                   |      |      |     |                                                                                                                                                                                    |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |              |              |  |  |

| FAULT CATEGORY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube |  | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function |  | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence |  | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |  |

# Picklist Print

May-06-14 8:05:57 AM

Work Order ID: 118881

**\*118881\***

Parent Item: D350-748-201

**\*D350-748-201\***

Parent Item Name: Aft Crosstube

Start Date: 5/20/14

Required Date: 5/20/14

Start Qty: 1.00

Required Qty: 1.00

AN4-6A

Purchased

No

220

Each

2,952.000

16

16

**\*AN4-6A\***

BOLT

\*\*

130716

DAS  
28  
9-89

Location

Loc Qty

Loc Code

ST355

600

M128403

600

ST514

2352

M126317

350

M127817

2

M128634

2000

DAS  
27  
9-89

AN5-32A

Purchased

No

220

Each

398.0000

4

4

**\*AN5-32A\***

Bolt

\*\*

130716

DAS  
28  
9-89

Location

Loc Qty

Loc Code

Return2014

8

123523

4

124805

4

ST337

114

124215

110

m127363

4

st503

126

m127550

30

m128403

96

ST504

150

m128634

150

DAS  
27  
9-89

D3500-1

Manufactured

No

220

Each

33.0000

4

4

**\*D3500-1\***

Saddle

\*\*

121518

FEB 24 2015

FEB 27 2015

DAS  
28  
9-89

Location

Loc Qty

Loc Code

ST430A

33

108799

33

DAS  
27  
9-89

May-06-14 8:05:57 AM

Shop Packet Print

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>                                                                                                                                                 | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>                                                                                                                                                 | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>                                                                                                                                                 | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|-----------------------------------------------------|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

### FAULT CATEGORY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other<br><br>_____<br>_____<br>_____ |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

# Picklist Print

Page 3

May-06-14 8:05:57 AM

Work Order ID: 118881

**\*118881\***

Parent Item: D350-748-201

**\*D350-748-201\***

Parent Item Name: Aft Crosstube

Start Date: 5/20/14

Required Date: 5/20/14

Start Qty: 1.00

Required Qty: 1.00

D3501-1

Manufactured No

220

Each

174.0000

16

16

**\*D3501-1\***

Bushing

**\*\***

DAS  
86

FEB 24 2015

9-89

DAS  
28  
9-89

DAS  
27  
9-89

Location

Loc Qty

Loc Code

ST043

2

86913

2

ST052

172

115846

172

120509x11

121654x5

D3502-1

Manufactured No

200

Each

103.0000

2

2

**\*D3502-1\***

Support

**\*\***

DAS  
41  
9-89

15-2-18

Location

Loc Qty

Loc Code

LG

8

110785

8

LG050

95

104334

6

110283

13

113181

18

114329

12

88465

2

94722

20

97212

12

99764

12

2

May-06-14 8:05:57 AM

Shop Packet Print

Page 3

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>                                                                                                                                                 | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>                                                                                                                                                 | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>                                                                                                                                                 | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|-----------------------------------------------------|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

### FAULT CATEGORY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence |
| <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |



# Picklist Print

May-06-14 8:05:57 AM

Work Order ID: 118881

\*118881\*

Parent Item: D350-748-201

\*D350-748-201\*

Parent Item Name: Aft Crosstube

Start Date: 5/20/14

Required Date: 5/20/14

Start Qty: 1.00

Required Qty: 1.00

D350-748-241TRN

Manufactured

No

B113987

110

Each

14.0000

1

\*\*

①

TW 14-11-06

\*D350-748-241TRN\*

Crosstube Turning Detail

DAS  
27  
9-89

Location

Loc Qty

Loc Code

LG

14

102766

1

109688

1

109689

1

109690

1

109691

1

110563

1

112165

1

112166

1

112167

1

112168

1

112169

1

112170

1

112171

1

112172

1

D3595-063-395

Manufactured

No

200

Each

118.0000

2

\*\*

2

DAS  
41  
9-89

15-2-18

\*D3595-063-395\*

Rubber Cushion

115027

Location

Loc Qty

Loc Code

FG

5

87353

5

LG

33

110958

8

112363

25

LG051

20

114243

20

ST412

60

113105

60

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>                                                                                                                                                 | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>                                                                                                                                                 | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>                                                                                                                                                 | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|-----------------------------------------------------|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

### FAULT CATEGORY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |
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Picklist Print

May-06-14 8:05:57 AM

Page 5

Work Order ID: 118881

\*118881\*

Parent Item: D350-748-201

\*D350-748-201\*

Parent Item Name: Aft Crosstube

Start Date: 5/20/14

Required Date: 5/20/14

Start Qty: 1.00

Required Qty: 1.00

MS21042L4

Purchased

No

220

Each

7,476.000

24

24

\*MS21042I 4\*

Locknut

\*\*

131618

DAS  
66  
9-89

DAS  
28  
9-89

DAS  
27  
9-89

Location

Loc Qty

Loc Code

ST314

64

m126015

12

m126275

52

ST509

7401

m127255

71

m127813

994

m128300

1336

m128798

5000

ST518

11

m127376

11

MS21042L5

Purchased

No

220

Each

1,374.000

4

4

\*MS21042I 5\*

Nut

\*\*

DAS  
66  
9-89

FEB 24 2015

DAS  
28  
9-89

DAS  
27  
9-89

Location

Loc Qty

Loc Code

GA

1

117611

1

Return2014

8

125684

8

ST315

3

m127304

3

ST509

1362

m127813

500

m128810

862

May-06-14 8:05:57 AM

Shop Packet Print

Page 5

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>                                                                                                                                                 | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>                                                                                                                                                 | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>                                                                                                                                                 | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|-----------------------------------------------------|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

### FAULT CATEGORY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                            |
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| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge | <input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |
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# Picklist Print

May-06-14 8:05:57 AM

Work Order ID: 118881

**\*118881\***

Parent Item: D350-748-201

**\*D350-748-201\***

Parent Item Name: Aft Crosstube

Start Date: 5/20/14

Required Date: 5/20/14

Start Qty: 1.00

Required Qty: 1.00

MS21920-22

Purchased

No

200

Each

279.0000

2

2

DAS

**\*MS21920-22\***

**\*\***

41

9-89

15-2-18

Clamp

Location

Loc Qty

Loc Code

LG

200

M128636

200

2

LG050

79

M127255

40

M127608

3

M128199

36

MS27039-1-10

Purchased

No

200

Each

726.0000

1

1

DAS

**\*MS27039-1-10\***

**\*\***

41

9-89

15-2-17

SCREW

130358

Location

Loc Qty

Loc Code

ST305

111

m126474

1

m128401

110

ST506

600

m128635

600

st507

15

m127993

15

NAS1149D0363J

Purchased

No

200

Each

4,629.000

1

1

DAS

**\*NAS1149D0363.J\***

**\*\***

41

9-89

15-2-17

Washer

Location

Loc Qty

Loc Code

GA

23

124392

23

ST510a

4606

m126319

17

m128429

4589

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width:100%; border: none;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>                                                                                                                                                 | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>                                                                                                                                                 | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>                                                                                                                                                 | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|-----------------------------------------------------|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

### FAULT CATEGORY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other<br><br>_____<br>_____<br>_____ |
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# Picklist Print

May-06-14 8:05:57 AM

Page 7

Work Order ID: 118881

\*118881\*

Parent Item: D350-748-201

\*D350-748-201\*

Parent Item Name: Aft Crosstube

Start Date: 5/20/14

Required Date: 5/20/14

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0463J

Purchased

No

220

Each

7,222.000

32

32

\*NAS1149D0463.I\*

WASHER

\*\*

129390

DAS  
66  
9-89

DAS  
28  
9-89

DAS  
27  
9-89

Location

Loc Qty

Loc Code

ST294

24

M128591

24

ST510a

7198

M126221

20

M127813

22

M127904

3000

M128591

2656

M128995

1500

NAS1149D0563J

Purchased

No

220

Each

3,999.000

8

8

\*NAS1149D0563.I\*

Washer

\*\*

131024

DAS  
66  
9-89

FEB 24 2015

DAS  
27  
9-89

Location

Loc Qty

Loc Code

GA

201

m125807

201

ST510a

3798

m126319

1798

m128257

2000

DAS  
28  
9-89

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                              |                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> | Skid-tube <input type="checkbox"/>   | Crosstube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                           | Crosstube <input type="checkbox"/>                                                                                                                                                 | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Engineering <input type="checkbox"/> |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                           | Small Fab <input type="checkbox"/>                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Quality <input type="checkbox"/>     |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                       | Finishing <input type="checkbox"/>                                                                                                                                                 | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Other <input type="checkbox"/>       |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                           | Composite <input type="checkbox"/>                                                                                                                                                 | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                      |                                    |                                    |                                      |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |

| Root Cause    | Date | Step | Qty | Description of work order update or non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector |
|---------------|------|------|-----|-----------------------------------------------------|-------------------|--------------------|-------------|--------------|--------------|
| Design        |      |      |     |                                                     |                   |                    |             |              |              |
| Doc/Data      |      |      |     |                                                     |                   |                    |             |              |              |
| Equip/Tooling |      |      |     |                                                     |                   |                    |             |              |              |
| Handling/Pre  |      |      |     |                                                     |                   |                    |             |              |              |
| Material      |      |      |     |                                                     |                   |                    |             |              |              |
| Operator      |      |      |     |                                                     |                   |                    |             |              |              |
| Offset/Setup  |      |      |     |                                                     |                   |                    |             |              |              |
| Process       |      |      |     |                                                     |                   |                    |             |              |              |
| Supplier      |      |      |     |                                                     |                   |                    |             |              |              |
| Training      |      |      |     |                                                     |                   |                    |             |              |              |
| Transport     |      |      |     |                                                     |                   |                    |             |              |              |
| Unapproved    |      |      |     |                                                     |                   |                    |             |              |              |

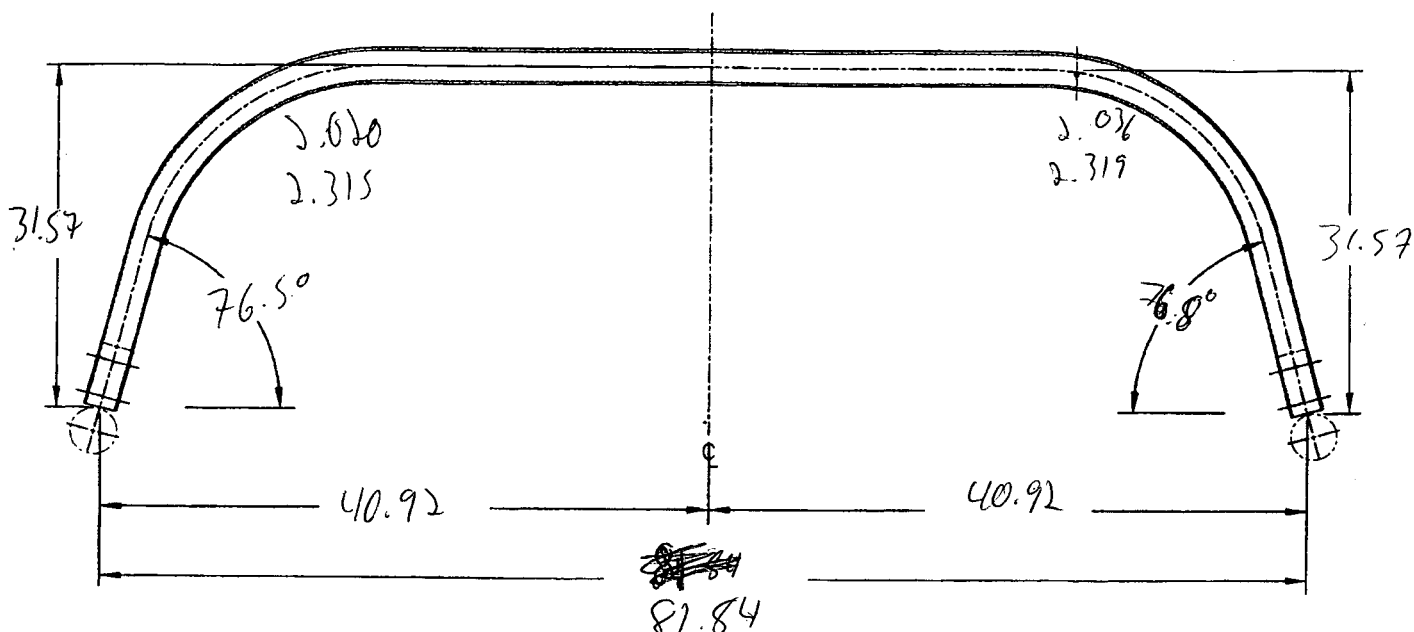
### FAULT CATEGORY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Landing Gear</b><br><input type="checkbox"/> Bending<br><input type="checkbox"/> Centre Not Concentric<br><input type="checkbox"/> Cracks<br><input type="checkbox"/> Crimp/Kink/Ripple/Wave<br><input type="checkbox"/> Cuffs<br><input type="checkbox"/> Crushing<br><input type="checkbox"/> Heat Treat<br><input type="checkbox"/> Inspection Strip in Tube<br><input type="checkbox"/> Marks/Chatter<br><input type="checkbox"/> Turning Sequence<br><input type="checkbox"/> Wave/Twist in Tube | <b>General</b><br><input type="checkbox"/> Bend<br><input type="checkbox"/> BOM/Route<br><input type="checkbox"/> Broken/Damage/Defect<br><input type="checkbox"/> Burrs<br><input type="checkbox"/> Contamination<br><input type="checkbox"/> Countersink<br><input type="checkbox"/> Cut Too Short<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Drill Holes<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Fit/Function | <input type="checkbox"/> Folio/Program<br><input type="checkbox"/> Grain<br><input type="checkbox"/> Hardware<br><input type="checkbox"/> Inspection Incomplete/Unqualified<br><input type="checkbox"/> Instructions Incomplete/Unclear<br><input type="checkbox"/> Misaligned/off center<br><input type="checkbox"/> Mislabeled<br><input type="checkbox"/> Misread<br><input type="checkbox"/> Off-set<br><input type="checkbox"/> Out of Calibration<br><input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Outside Dimensions<br><input type="checkbox"/> Over/Under tolerance<br><input type="checkbox"/> Part Incorrect<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Part Moved<br><input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Power Loss/Surge<br><br><input type="checkbox"/> Pressure/Forced<br><input type="checkbox"/> Set-up<br><input type="checkbox"/> Temperature/Cure<br><input type="checkbox"/> Weld<br><input type="checkbox"/> Wrong Stock Pulled<br><input type="checkbox"/> Other |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



|                                                    |  |                     |              |
|----------------------------------------------------|--|---------------------|--------------|
| <b>DART AEROSPACE LTD</b>                          |  | <b>Work Order:</b>  | 118881       |
| <b>Description:</b> Crosstube High Aft (AS350/355) |  | <b>Part Number:</b> | D350-748-201 |
| <b>Inspection Dwg:</b> D350-748-241 <b>Rev:</b> G  |  | <b>Page 1 of 1</b>  |              |

| Required Dimension | Min   | Max   |
|--------------------|-------|-------|
| Height             | 31.22 | 31.48 |
| 1/2 Span           | 40.77 | 41.03 |
| Angle              | 75    | 77    |
| Total Span         | 81.54 | 82.06 |
| Bending Passes     | 7     | --    |
| Crushing           | --    | 7%    |
| Twist              | --    | 0.38  |



|                       | Side A | Side B |
|-----------------------|--------|--------|
| <b>Bending Passes</b> | 4      | 4      |
| <b>Crushing</b>       | 6.8%   | 6.5%   |
| <b>Comments</b>       |        |        |
|                       |        |        |
|                       |        |        |
|                       |        |        |

|                 |       |
|-----------------|-------|
| QC15 Inspection | PD    |
| Date            | 11-27 |

| Rev | Date     | Change                                     | Revised by | Approved |
|-----|----------|--------------------------------------------|------------|----------|
| A   | 07.02.06 | New Issue                                  | KJ/JM      |          |
| B   | 10.08.23 | Dwg Rev updated                            | KJ         |          |
| C   | 12.04.16 | Added bending, crushing & twist dimensions | KJ         |          |
| D   | 12.07.31 | Dwg Rev updated                            | KJ         |          |
| E   | 13.02.27 | Dwg Rev updated                            | KJ         |          |
| F   | 14.02.13 | Crushing & twist dimensions revised        | KJ         |          |

| Item | Qty<br>-241 | Part Number                 | Description                            |
|------|-------------|-----------------------------|----------------------------------------|
| 1    | X           | D350-748-241                | CROSSTUBE ASSEMBLY (AS 350/355 HI AFT) |
| 2    | 1           | D6015-125                   | CROSSTUBE (OR D6018-125)               |
| 3    | 2           | D3502-1                     | SUPPORT                                |
| 4    | 2           | D3595-063-395               | RUBBER CUSHION                         |
| 5    | 1           | AELS-1032-225               | INSERT                                 |
| 6    | 1           | NAS1149D0363J               | WASHER (OR AN960JD10)                  |
| 7    | 2           | MS21920-22<br>OR MS21920-21 | CLAMP (PER DART SPEC. M-MS21920-21/22) |
| 8    | 1           | MS27039-1-10                | SCREW                                  |
| 9    | A/R         | PROSEAL 890 B-2             | SEALANT, AMS-S-8802 CLASS B-2          |

#### GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6015-125 OR D6018-125  
FINISHED LENGTH AFTER TURNING = 124.70±0.08 (AFTER BENDING/TRIMMING = 122.70 REF)
- 2) FINISH: MAGNETIC PARTICLE INSPECT PER DART QSI 038 4.2  
CADMIUM PLATE PER AMS-QQ-P-416B, CLASS 1, TYPE II  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCE: PER DART QSI 018 UNLESS OTHERWISE NOTED.  
WALL THICKNESS ECCENTRICITY PER DART QSI 038 7.2  
MIN. ALLOWABLE WALL IS -0.020 FROM NOMINAL
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: DART PART NUMBER "D350-748-241" AND BATCH NUMBER ON INSIDE OF CUFF  
PER DART QSI 044 6.4 (VIBRATING STYLUS)
- 7) WEIGHT: 29.85 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE, EXCEPT FOR Ø0.297 HOLE.
- 9) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE MUST BE TAKEN AND CAREFUL DEBURRING PERFORMED TO ENSURE A CLEAN HOLE WITH NO CRACKING/CHIPPING/GROOVES.

#### TURNING

- 10) BLEND OUT ALL EDGES FROM MACHINING LONGITUDINALLY. TRANSITION SHOULD BE SMOOTH. NOTE: ALL HOLES ARE DRILLED AFTER BENDING.
- 11) HEAT TREAT TO MIN. 180 KSI PER MIL-T-6736 OR AMS2759/1E AFTER TURNING. ACCEPTABLE TO VERIFY TENSILE STRENGTH BY HARDNESS TEST PER ASTM E18 TO 40-45 HRC.

#### BENDING

- 12) ALL DIMENSIONS FOR BENT TUBE ARE POST STRESS RELIEF
- 13) BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES PER SIDE. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D. ON TOP HALF OF BEND, AND 7% ON BOTTOM HALF OF BEND.
- 14) MAX AMPLITUDE OF RIBBLING ALONG BENT PORTION OF THE TUBE IS 0.030 (ZN A1-3)
- 15) AFTER BENDING, STRESS RELIEVE TUBE AT 650°F ±0.25°F FOR A MINIMUM OF 2 HRS AND ALLOW TO COOL TO AMBIENT TEMPERATURE (REF AMS2759/1E).
- 16) MAX TWIST AFTER STRESS RELIEF: WITH XTUBE LAYED FLAT ON SURFACE, THE DIFFERENCE BETWEEN CUFF HEIGHTS FROM THE SURFACE MAY BE NO LARGER THAN 0.38 (ZN C1-3).

#### ASSEMBLY

- 17) TO INSTALL D3502-1 SUPPORT: ABRASE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.02" TO 0.05" THICK LAYER OF PROSEAL 890 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- 18) TORQUE CLAMPS 60 TO 80 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.

118881 MLC  
1405-06

RELEASED  
2012-11-01

|                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                          |    |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|----|----------|
| G                                                                                                                                                                                                                                                                                                                                                                                                                                           | RMV ABRASION STRIP, SUPPORT NOW W/ PROSEAL & CUSHION, ADD STRESS RELIEF, LONGER CUFF, NOW TRIM'D AFTER BEND, ADD WALL DIMS & UPDATE TOL. | CP | 12.09.12 |
| F                                                                                                                                                                                                                                                                                                                                                                                                                                           | ADD HRC TEST OPTION (B8-1) PER PAR 09-040, ADD TWIST LIMIT (A8-1, C1-3), ADD D6015-125 OPTION (C8-1), STOCK DIM NOW MACHINED (D1-4)      | CP | 10.11.23 |
| E                                                                                                                                                                                                                                                                                                                                                                                                                                           | REVISE GENERAL NOTES: UPDATE TO CURRENT STANDARDS; RELOCATED FLAG #6 PER PAR 09-046 (ZN A8-3); ADD TOLERANCES (ZN C8-3, D2-3)            | RF | 09.09.30 |
| D                                                                                                                                                                                                                                                                                                                                                                                                                                           | MAG. PARTICLE AND CAD PLATE AS MFD.                                                                                                      | CP | 06.10.31 |
| C                                                                                                                                                                                                                                                                                                                                                                                                                                           | ADD CAD PLATING                                                                                                                          | CP | 06.08.14 |
| B                                                                                                                                                                                                                                                                                                                                                                                                                                           | ADD D6018-125 & PRIME AND PAINT                                                                                                          | CP | 06.06.30 |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                           | NEW ISSUE                                                                                                                                | CP | 06.03.31 |
| REV.                                                                                                                                                                                                                                                                                                                                                                                                                                        | DESCRIPTION                                                                                                                              | BY | DATE     |
| DESIGN                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                          |    |          |
| DRAWN                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                          |    |          |
| CHECKED                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                          |    |          |
| MFG. APPR.                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                          |    |          |
| APPROVED                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                          |    |          |
| DE APPR.                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                          |    |          |
| DATE                                                                                                                                                                                                                                                                                                                                                                                                                                        | 12.09.12                                                                                                                                 |    |          |
| <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA<br>DRAWING NO. D350-748-241<br>TITLE CROSSTUBE (AS 350/355 HI AFT)<br>REV. G SHEET 1 OF 4<br>SCALE NTS<br>COPYRIGHT © 2006 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. |                                                                                                                                          |    |          |

8 7 6 5 4 3 2 1

D

C

B

A

D

C

B

A

17 18  
D3502-1 SUPPORT  
MS21920-22 CLAMP (OR -21)  
D3595-063-395 RUBBER CUSHION  
2 PL



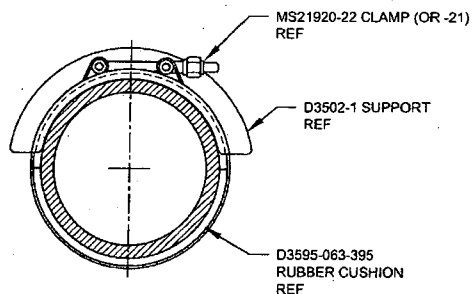
A7-2  
A  
A

14.37

D350-748-241  
BENT TUBE

INSTALL THIS SIDE ONLY, AFTER FINISH:  
AELS-1032-225 INSERT  
NAS1149D0363J WASHER  
MS27039-1-10 SCREW

**D350-748-241  
ASSEMBLY DETAIL**

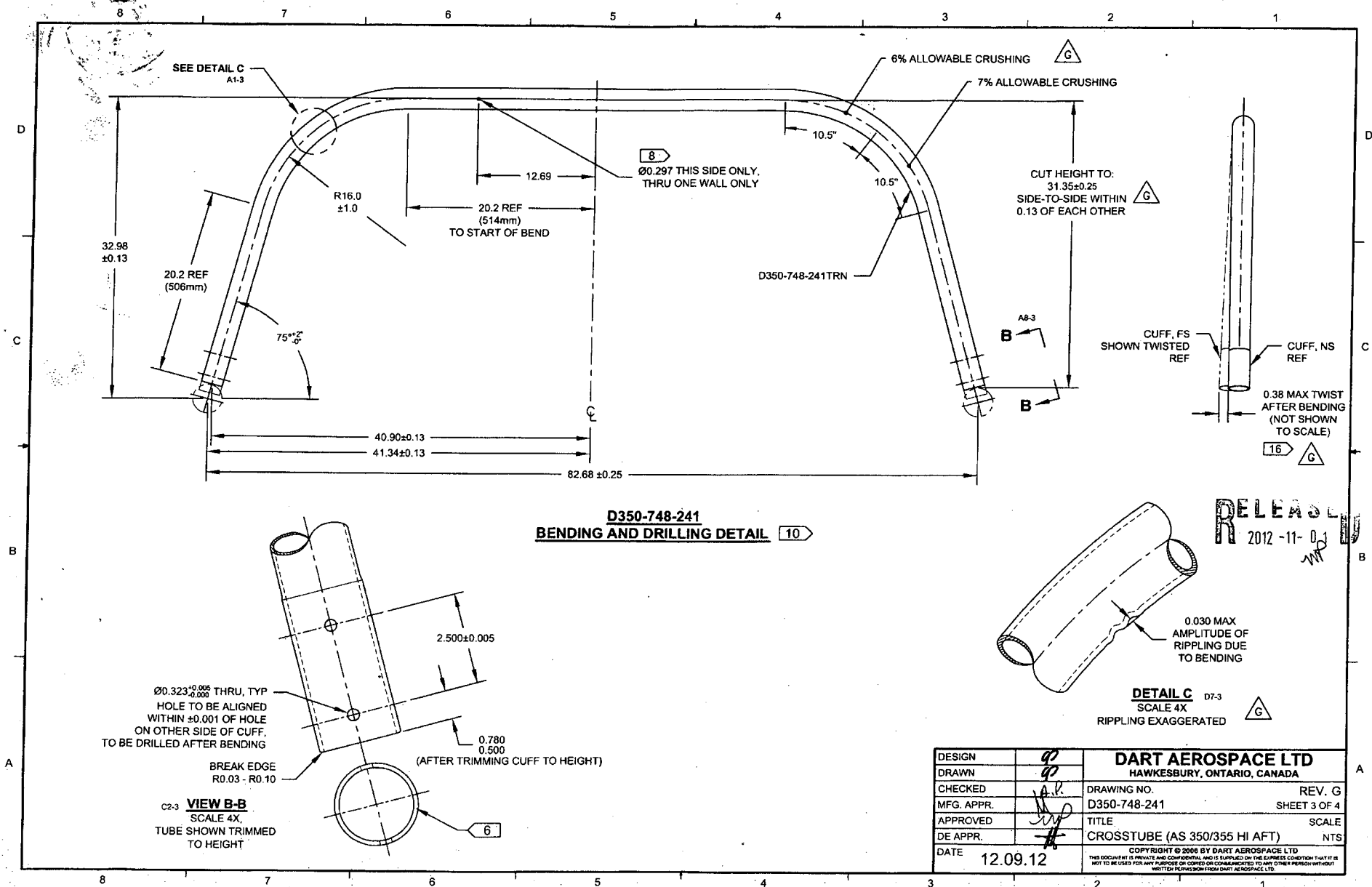


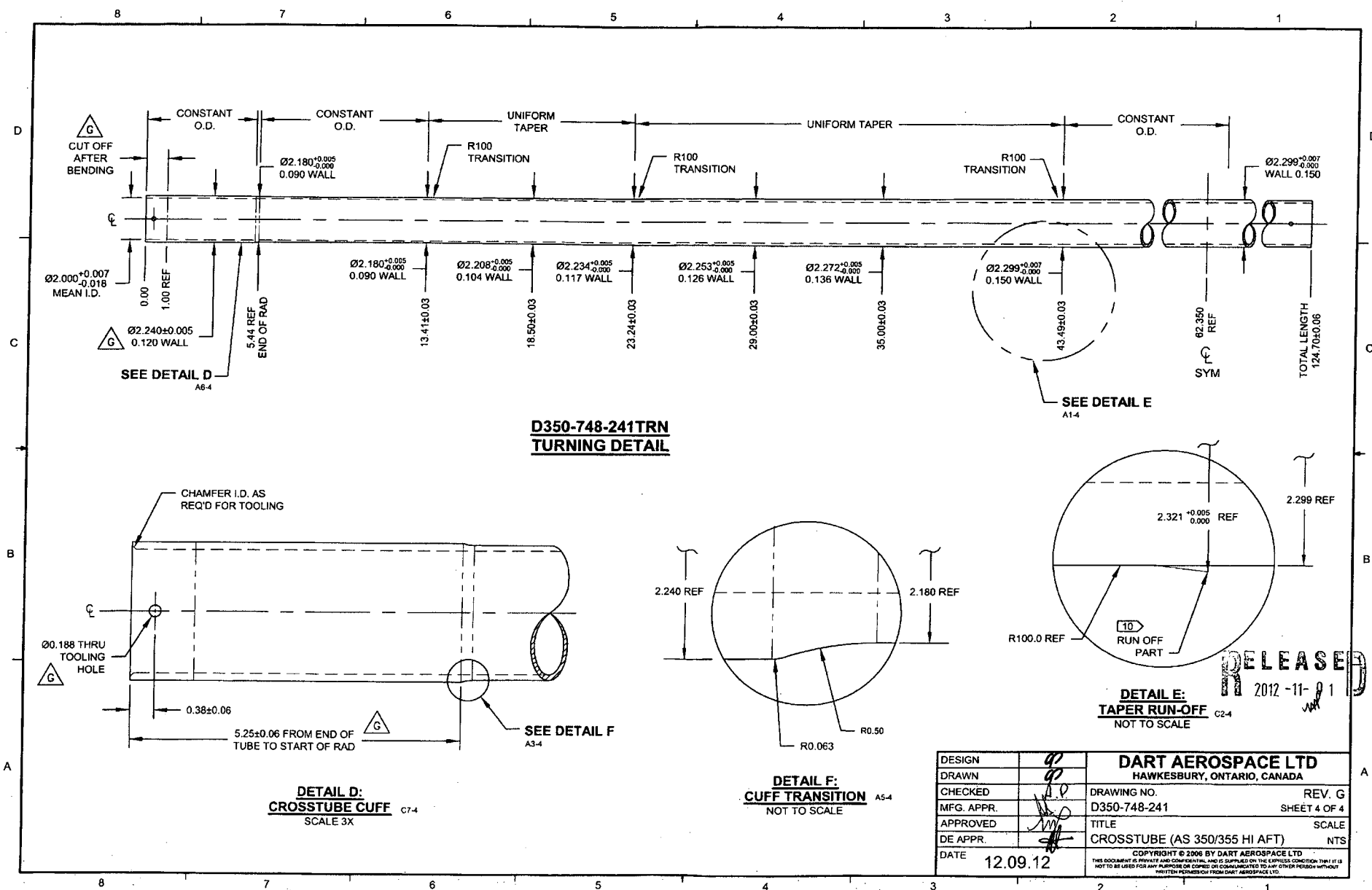
**SECTION A-A** D4-2  
SCALE 6X

RELEASED  
2012-11-01

|            |          |                                                                                                                                                                                                                                                                                      |              |
|------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| DESIGN     | 92       | <b>DART AEROSPACE LTD</b>                                                                                                                                                                                                                                                            |              |
| DRAWN      | 92       | HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                                          |              |
| CHECKED    | A. J.    | DRAWING NO.                                                                                                                                                                                                                                                                          | REV. G       |
| MFG. APPR. | #        | D350-748-241                                                                                                                                                                                                                                                                         | SHEET 2 OF 4 |
| APPROVED   | #        | TITLE                                                                                                                                                                                                                                                                                | SCALE        |
| DE APPR.   | #        | CROSSTUBE (AS 350/355 HI AFT)                                                                                                                                                                                                                                                        | NTS          |
| DATE       | 12.09.12 | <small>COPYRIGHT © 2006 BY DART AEROSPACE LTD<br/>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS<br/>NOT TO BE USED FOR ANY PURPOSE OR DISCLOSED TO ANY OTHER PERSON WITHOUT<br/>WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small> |              |

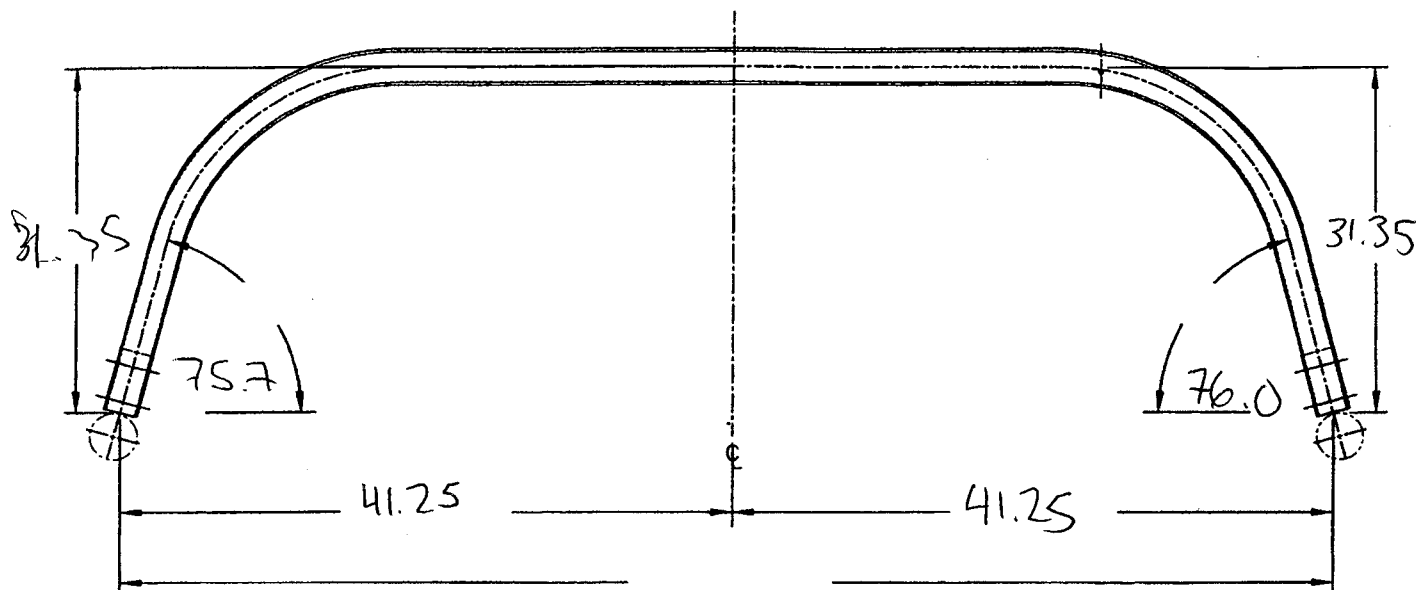
8 7 6 5 4 3 2 1





|                                                    |                     |                     |
|----------------------------------------------------|---------------------|---------------------|
| <b>DART AEROSPACE LTD</b>                          | <b>Work Order:</b>  |                     |
| <b>Description:</b> Crosstube High Aft (AS350/355) | <b>Part Number:</b> | <b>D350-748-201</b> |
| <b>Inspection Dwg:</b> D350-748-241 <b>Rev:</b> G  |                     | <b>Page 1 of 1</b>  |

| Required Dimension | Min   | Max   |
|--------------------|-------|-------|
| Height             | 31.22 | 31.48 |
| 1/2 Span           | 40.77 | 41.03 |
| Angle              | 75    | 77    |
| Total Span         | 81.54 | 82.06 |
| Bending Passes     | 7     | --    |
| Crushing           | --    | 7%    |
| Twist              | --    | 0.38  |



|                | Side A | Side B |
|----------------|--------|--------|
| Bending Passes | 42     | 43     |
| Crushing       |        |        |
| Comments       |        |        |
| twist = 0.000" |        |        |
|                |        |        |
|                |        |        |
|                |        |        |

|                 |  |
|-----------------|--|
| QC15 Inspection |  |
| Date            |  |

| Rev | Date     | Change                                     | Revised by | Approved |
|-----|----------|--------------------------------------------|------------|----------|
| A   | 07.02.06 | New Issue                                  | KJ/JM      |          |
| B   | 10.08.23 | Dwg Rev updated                            | KJ         |          |
| C   | 12.04.16 | Added bending, crushing & twist dimensions | KJ         |          |
| D   | 12.07.31 | Dwg Rev updated                            | KJ         |          |
| E   | 13.02.27 | Dwg Rev updated                            | KJ         |          |
| F   | 14.02.13 | Crushing & twist dimensions revised        | KJ         |          |

SPACE

Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

# PURCHASE ORDER

Purchase Order ID PO26406

Purchase Order Date 11/6/2014

PO Print Date 11/7/2014

Page Number 2 of 3

## Order From :

METCOR INC.  
560 BOUL. ARTHUR SAUVE  
SAINT-EUSTACHE, QC J7R 5A8  
CA

VC-MET004

## Ship To :

DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

## Contact Name

## Vendor Phone

450 473 1884

## Ship To Contact

## Ship To Phone

## Ship Via:

Yours ppd

## Ship Acct:

4 118881

D350-748-201  
CROSSTUBE

11/7/2014

## Buyer

Chantal Lavoie

## Customer POID

## Customer Tax #

10127-2607

## Terms

Net 30

## Currency

CAD

## FOB

FCA - (Free Carrier)

Yes

11/7/2014

HEAT TREAT CROSSTUBE AS PER QSI010 4.3  
WITHIN 12H AFTER BENDING

8214-11-11

Line Total:

\$275.53

5 120199

D350-748-201  
CROSSTUBE

11/7/2014

1.00

\$275.53

\$275.53

Yes

11/7/2014

HEAT TREAT CROSSTUBE AS PER QSI010 4.3  
WITHIN 12H AFTER BENDING

Line Total:

\$275.53

6 120200

D350-748-201  
CROSSTUBE

11/7/2014

1.00

\$275.53

\$275.53

Yes

11/7/2014

HEAT TREAT CROSSTUBE AS PER QSI010 4.3  
WITHIN 12H AFTER BENDING

Note:

11/7/2014

# METCOR INC.

580 BOUL. ARTHUR SAUVÉ  
ST-EUSTACHE, QC J7R 5A8  
Tel: 450-473-1884 / Fax: 450-491-5498

## Recu de livraison

Delivery Receipt

| BON DE TRAVAIL<br>Order | EXPÉDITEUR<br>Shipper ID | BON D'EXPÉDITION<br>Shipper |
|-------------------------|--------------------------|-----------------------------|
| 200350                  | 1                        | 85991                       |

EXPÉDITION COMPLÈTE / Shipped Complete

CLIENT / Customer 215

DART AEROSPACE  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
Ph: 613-632-5200  
Fax: 613-632-1053



LIVRÉ À / Shipped To

DART AEROSPACE  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
Ph: 613-632-5200  
Fax: 613-632-1053

| COMMANDE DU CLIENT<br>Customer PO | BON DE LIVRAISON DU CLIENT<br>Customer Shipper No | TYPE DE MATÉRIEL<br>Material Type | DATE DE LA COMMANDE<br>Order Date           | TRANSPORTEUR<br>Carrier |
|-----------------------------------|---------------------------------------------------|-----------------------------------|---------------------------------------------|-------------------------|
| 26408                             |                                                   | STEEL                             | 2014/11/6                                   | client                  |
| QUANTITÉ<br>Quantity              | No. PIÈCE /<br>Part No                            | NOM DE LA PIÈCE /<br>Part Name    | DESCRIPTION DE LA PIÈCE<br>Part Description | POIDS<br>Weight         |

5 D350-748-101

155,

CROSSTUBE

(1) D350-748-101 120281

(1) D350-748-201 118880

(1) D350-748-201 118881

(1) D350-748-201 120199

(1) D350-748-201 120200

1 NIL

SP14-11-11

CERTIFICAT

QUANTITÉ EXPÉDIÉE / Quantity Shipped: 5

POIDS EXPÉDIÉ / Weight Shipped: 155,00

Signature:

Date:



# METCOR INC.

560 BOUL. ARTHUR GAUVE  
ST-EUSTACHE, QC J7R 6A8  
Tel: 450-473-1884 / Fax: 450-491-5498

## Reçu de livraison

Delivery Receipt

| BON DE TRAVAIL<br>Order | EXPÉDITEUR<br>Shipper ID | BON D'EXPÉDITION<br>Shipper |
|-------------------------|--------------------------|-----------------------------|
| 200350                  | 1                        | 85991                       |

EXPÉDITION COMPLETE / Shipped Complete

CLIENT / Customer 215

DART AEROSPACE  
1270 ABERDEEN  
HAWKESBURY ON K6A 1K7  
Ph: 613-632-5200  
Fax: 613-632-1053

LIVRE À / Shipped To

DART AEROSPACE  
1270 ABERDEEN  
HAWKESBURY ON K6A 1K7  
Ph: 613-632-5200  
Fax: 613-632-1053



| COMMANDE DU CLIENT<br>Customer PO | BON DE LIVRAISON DU CLIENT<br>Customer Shipper No. | TYPE DE MATÉRIEL<br>Material Type | DATE DE LA COMMANDE<br>Order Date | TRANSPORTEUR<br>Carrier |
|-----------------------------------|----------------------------------------------------|-----------------------------------|-----------------------------------|-------------------------|
| 26406                             |                                                    | STEEL                             | 2014/11/6                         | client                  |

| TYPE DE CONTENEUR<br>Container Type | # DE CONTENEURS<br># Of Containers | COMMENTAIRES CONTENEUR<br>Container Comments |
|-------------------------------------|------------------------------------|----------------------------------------------|
| NIL                                 | 1                                  |                                              |

### CERTIFICAT

|                        |  |
|------------------------|--|
| EMPAQUETAGE<br>Packing |  |
|------------------------|--|

QUANTITÉ EXPÉDIÉE / Quantity Shipped: 5

POIDS EXPÉDIÉ / Weight Shipped: 155,00

QUANTITÉ RESTANTE / Quantity Remaining: 0

POIDS RESTANT / Weight Remaining: 0,00

8214-11-11

### CERTIFICAT

QUANTITÉ EXPÉDIÉE / Quantity Shipped: 5

POIDS EXPÉDIÉ / Weight Shipped: 155,00

Signature:

Date:

**METCOR INC.**

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

**Rapport d'Inspection****Inspection Report**

| BON DE TRAVAIL<br>order | CHARGEMENT<br>load |
|-------------------------|--------------------|
| 200350                  | 1                  |

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K8A 1K7

LIVRÉ À / shipped to:

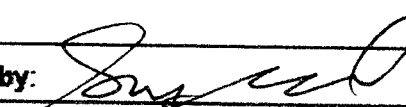
DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K8A 1K7

| COMMANDE DU CLIENT<br>customer po                                                                                                                                 | BON DE LIVRAISON DU CLIENT<br>customer shipper no. | MATÉRIEL<br>material                        | MAÎTRE D'OEUVRE<br>prime contractor | PROGRAM |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------|-------------------------------------|---------|
|                                                                                                                                                                   |                                                    |                                             |                                     |         |
| <b><u>SPÉCIFICATIONS DU PROCÉDÉ</u></b><br>processing specifications                                                                                              |                                                    |                                             |                                     |         |
| STRESS REL                                                                                                                                                        |                                                    |                                             |                                     |         |
| SAE AMS 2759/1 REV.E                                                                                                                                              |                                                    |                                             |                                     |         |
| <b><u>EXIGENCE / requirement</u></b> <b><u>SPÉCIFICATIONS / specified</u></b> <b><u>TESTS EXÉCUTÉS / performed</u></b> <b><u>RÉSULTATS DE TESTS / results</u></b> |                                                    |                                             |                                     |         |
| Visual                                                                                                                                                            |                                                    |                                             |                                     |         |
| QUANTITÉ<br>quantity                                                                                                                                              | POIDS<br>weight                                    | DESCRIPTION DES PIÈCES<br>parts description |                                     |         |
| 5                                                                                                                                                                 | 155                                                | D350-748-101<br>CROSSTUBE<br>5 PIECES       |                                     |         |
|                                                                                                                                                                   |                                                    | 1 NIL                                       |                                     |         |

**COMMENTAIRES / comments****APPROUVÉ par / Approved by:**


**DATE: 2014-11-07**

# METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

## Certificat de Conformité Détaillé

Detailed Certificate of Compliance

| BON DE TRAVAIL<br>order | CHARGEMENT<br>load |
|-------------------------|--------------------|
| 200350                  | 1                  |

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

| COMMANDE DU CLIENT<br>customer po | BON DE LIVRAISON DU CLIENT<br>customer shipper no. | MATÉRIEL<br>material | MAÎTRE D'OEUVRE<br>prime contractor | PROGRAM |
|-----------------------------------|----------------------------------------------------|----------------------|-------------------------------------|---------|
| 26406                             |                                                    |                      |                                     |         |

### SPÉCIFICATIONS DU PROCÉDÉ processing specifications

STRESS REL

SAE AMS 2759/1 REV.E

| EXIGENCE / requirement | SPÉCIFICATIONS / specified | TESTS EXÉCUTÉS / performed | RÉSULTATS DE TESTS / results |
|------------------------|----------------------------|----------------------------|------------------------------|
| Visual                 |                            |                            |                              |

| QUANTITÉ<br>quantity | POIDS<br>weight | DESCRIPTION DES PIÈCES<br>parts description                                                                                                                                   |
|----------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5                    | 155             | D350-748-101<br>CROSSTUBE<br>(1) D350-748-101 120281<br>(1) D350-748-201 118880<br>(1) D350-748-201 118881<br>(1) D350-748-201 120199<br>(1) D350-748-201 120200<br><br>1 NIL |

### COMMENTAIRES / comments

STRESS RELIEF 343C, 2 HRS

Le traitement thermique (TT) a été fait en utilisant des équipements en conformité avec AMS2759.

Le TT a été fait tel que requis par AMS2759 et toutes les vérifications et les tests demandés ont été faites et documentés. Aucun changement n'a été faite par rapport au TT. On certifie que le matériel a été fabriqué, échantillonné, testé et inspecté en accord avec AMS2759 et le bon de commande et le matériel rencontre les exigences spécifiées.

Heat treatment (HT) was performed with equipment that meets the requirements of AMS2759.

All HT operations were in compliance with AMS2759 and all verifications have been performed and documented. No unauthorized changes were performed in regards to the HT. We certify that the material was manufactured, sampled, tested and inspected in accordance with AMS2759 and the purchase order and was found to meet the requirements.

# METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

**Certificat de Conformité Détaillé**

Detailed Certificate of Compliance

| BON DE TRAVAIL<br>order | CHARGEMENT<br>load |
|-------------------------|--------------------|
| 200350                  | 1                  |

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

APPROUVÉ par / Approved by:

*Isabel Otero*  
Isabel Otero  
QA Technician

DATE: 2014-11-07







Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO26894**

Purchase Order Date 12/23/2014

PO Print Date 12/23/2014

Page Number 3 of 5

**Order From :**

CADORATH COATING  
2150 LOGAN AVE.  
WINNIPEG, MB R2R 0J2  
CA

VC-CAD002

**Ship To :** DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone** 204 633 9420

**Ship To Contact**

**Ship To Phone**

**Ship Via:** Day & Ross collect

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms**

Net 30

**Currency**

CAD

**FOB**

Destination-Collect

|   |        |                           |           |        |          |          |
|---|--------|---------------------------|-----------|--------|----------|----------|
| 6 | 118881 | D350-748-201<br>CROSSTUBE | 1/23/2015 | 1.00 ✓ | \$803.42 | \$803.42 |
|---|--------|---------------------------|-----------|--------|----------|----------|

AS ABOVE

Yes  
1/23/2015

8015-02-10

**Line Total: \$803.42**

|   |        |                           |           |      |          |          |
|---|--------|---------------------------|-----------|------|----------|----------|
| 7 | 120198 | D350-748-201<br>CROSSTUBE | 1/23/2015 | 1.00 | \$803.42 | \$803.42 |
|---|--------|---------------------------|-----------|------|----------|----------|

AS ABOVE

Yes  
1/23/2015

**Line Total: \$803.42**

|   |        |                           |           |      |          |          |
|---|--------|---------------------------|-----------|------|----------|----------|
| 8 | 120199 | D350-748-201<br>CROSSTUBE | 1/23/2015 | 1.00 | \$803.42 | \$803.42 |
|---|--------|---------------------------|-----------|------|----------|----------|

AS ABOVE

Yes  
1/23/2015

**Line Total: \$803.42**

**Note:**

12/23/2014

# Packing Slip



## Cadorath Coating

2150 Logan Avenue, Winnipeg, Manitoba R2R-0J2

Phone: (204) 633-9420 Fax: (204) 633-8033

**INVOICE NUMBER:**

**S75044**

**Sold To:**

Dart Aerospace Ltd.  
1270 Aberdeen St.

Hawksbury, ON K6A 1K7

**ShipTo:**

Net 2% Interest Per Month charged on Overdue Accounts.

Any claims for shortages, overcharges, or damaged goods must be made within seven (7) days from receipt of goods.

| Customer Order #: | Date Received: | Terms:      | G.S.T. #:         | Ship Via: | Ship Date:  |
|-------------------|----------------|-------------|-------------------|-----------|-------------|
| 26894             | Jan-19-2015    | NET 30 DAYS | 10071 6547 RT0001 |           | Feb-05-2015 |

| Item # | Qty  | P/N & Description |            |
|--------|------|-------------------|------------|
| 1      | 1 EA | CROSSTUBE         | S/N 116923 |
|        |      | P/N d350-748-101  | W/O 143069 |
| 2      | 1 EA | CROSSTUBE         | S/N 119449 |
|        |      | P/N d350-748-101  | W/O 143070 |
| 3      | 1 EA | CROSSTUBE         | S/N 120274 |
|        |      | P/N d350-748-101  | W/O 143071 |
| 4      | 1 EA | CROSSTUBE         | S/N 120281 |
|        |      | P/N d350-748-101  | W/O 143072 |
| 5      | 1 EA | CROSSTUBE         | S/N 118880 |
|        |      | P/N D350-748-201  | W/O 143073 |
| 6      | 1 EA | CROSSTUBE         | S/N 118881 |
|        |      | P/N D350-748-201  | W/O 143074 |
| 7      | 1 EA | CROSSTUBE         | S/N 120198 |
|        |      | P/N D350-748-201  | W/O 143075 |
| 8      | 1 EA | CROSSTUBE         | S/N 120199 |
|        |      | P/N D350-748-201  | W/O 143076 |
| 9      | 1 EA | CROSSTUBE         | S/N 120200 |
|        |      | P/N D350-748-201  | W/O 143077 |
| 10     | 1 EA | CROSSTUBE         | S/N 122531 |
|        |      | P/N D350-748-201  | W/O 143078 |
| 11     | 1 EA | CROSSTUBE         | S/N 122532 |
|        |      | P/N D350-748-201  | W/O 143079 |
| 12     | 1 EA | CROSSTUBE         | S/N 122927 |
|        |      | P/N D350-748-201  | W/O 143080 |

SP15-02-10

**CERTIFICATE OF  
CONFORMANCE**

**CADORATH PLATING CO. LTD.  
2150 LOGAN AVENUE  
WINNIPEG, MANITOBA R2J-0J1**

**DATE:** Feb-05-2015

**CONSIGNED TO:** Dart Aerospace Ltd.  
1270 Aberdeen St.  
Hawksbury, ON K6A 1K7

**W/O #:** 143074

**INVOICE #:** 75044

**CONTRACT OR  
PURCHASE ORDER #** 26894

**DESCRIPTION:** CROSSTUBE

**QTY** 1

**P/N #** D350-748-201 ✓

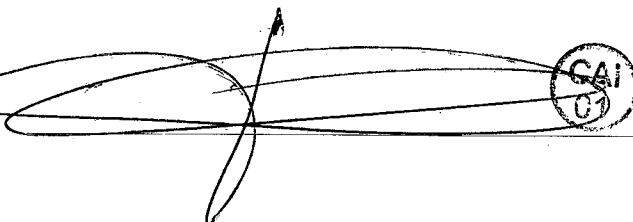
**S/N #** 118881

STRESS RELIEF BAKE HEAT CHART # 15-41.MPI IAW ASTM-E-1444.  
CADMIUM PLATE IAW AMS-QQ-P-416C TYPE 2 YELLOW CLASS 1.  
FINAL MPI IAW ASTM-E-1444. EMBRITTLE RELIEF BAKE HEAT  
CHART # 15-86.

SP15-02-10

**CERTIFICATE:** I certify that the items indicated here on have  
been inspected and tested and conform to all specifications  
and requirements detailed on the contract or purchase order.

**Approved Inspector:**









Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

**Purchase Order ID PO27400**

**Purchase Order Date** 2/11/2015

**PO Print Date** 2/12/2015

**Page Number** 5 of 6

**Order From :**  
SKYSERVICE  
6120 MIDFIELD ROAD  
MISSISSAUGA, ONTARIO L5P 1B1  
CANADA

VC-SKY001

**Ship To :** DART AEROSPACE LTD  
1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**Contact Name**

**Vendor Phone** 905-678-5636

**Ship To Contact**

**Ship To Phone**

**Ship Via:** Delivered

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms** Net 30

**Currency** CAD

**FOB** FCA - (Free Carrier)

|    |        |                           |           |      |  |          |          |
|----|--------|---------------------------|-----------|------|--|----------|----------|
| 12 | 118881 | D350-748-201<br>CROSSTUBE | 2/12/2015 | 1.00 |  | \$104.50 | \$104.50 |
|----|--------|---------------------------|-----------|------|--|----------|----------|

Yes

2/12/2015

AS ABOVE

2015-02-12

**Line Total: \$104.50**

|    |        |                           |           |      |  |          |          |
|----|--------|---------------------------|-----------|------|--|----------|----------|
| 13 | 120198 | D350-748-201<br>CROSSTUBE | 2/12/2015 | 1.00 |  | \$104.50 | \$104.50 |
|----|--------|---------------------------|-----------|------|--|----------|----------|

Yes

2/12/2015

AS ABOVE

**Line Total: \$104.50**

|    |        |                           |           |      |  |          |          |
|----|--------|---------------------------|-----------|------|--|----------|----------|
| 14 | 120199 | D350-748-201<br>CROSSTUBE | 2/12/2015 | 1.00 |  | \$104.50 | \$104.50 |
|----|--------|---------------------------|-----------|------|--|----------|----------|

Yes

2/12/2015

AS ABOVE

**Line Total: \$104.50**

**Note:**

2/12/2015



# skyservice Work Order Traveler

Sky Service F.B.O. Inc.

DOT APP 53-89 / EASA 145.7142 / BDA AMO 385

|                   |                               |               |                  |
|-------------------|-------------------------------|---------------|------------------|
| WO #: MWO23614    | Customer: Dart Aerospace Ltd. | Dept: NDT YUL | Reference: 27400 |
| Descr:            | PN:                           | S/N:          | Qty: 1           |
| Make:             | Model:                        | Reg:          | A/C S/N:         |
| TSN:              | CSN:                          | TSO:          |                  |
| Task: UNSCHEDULED |                               |               | Sequence: 1      |

## Work Required:

CARRY OUT NDT ON 13 CROSSTUBES AND 1 FUEL TANK ASSY

1 FUEL TANK ASSY: ITEM ID# D4464-041, W/O ID# 129347  
5 FWD CROSSTUBES: ITEM ID# D350-748-101, W/O ID# 122288, 116923, 119449, 120274, 120281,  
8 AFT CROSSTUBES: ITEM ID# D350-748-201, W/O ID# 122531, 122532, 122927, 118880, 118881, 120198, 120199, 120200,                     

2015-02-12

|                                                                                                                                                                                                                   |                                |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------------|
| Action Taken:                                                                                                                                                                                                     | Date:                          | Initial/Stamp: |
| LIQUID PENETRANT C/O ON ITEMS LISTED ABOVE AS PER ASTM E-1417M-13<br><br>CRACK FOUND ON FUEL TANK ASSY INDICATED ON THE TANK<br><br>REMAINING ITEMS: NO CRACK FOUND<br><br>ARDROX 970P25E BATCH# 2312131, M-20141 | FEB 11 2015<br><br>FEB 11 2015 | <br>           |

| Description | Location | P/N  | Qty | Batch | S/N Off | S/N On |
|-------------|----------|------|-----|-------|---------|--------|
|             |          | DAS  |     |       |         |        |
|             |          | 38   |     |       |         |        |
|             |          | 9-89 |     |       |         |        |
|             |          |      |     |       |         |        |
|             |          |      |     |       |         |        |
|             |          |      |     |       |         |        |
|             |          |      |     |       |         |        |
|             |          |      |     |       |         |        |
|             |          |      |     |       |         |        |

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

|                      |               |             |
|----------------------|---------------|-------------|
| Signature:           | ACA/SCA Stamp | Date:       |
| Name: RAFIK MELIKIAN |               | FEB 11 2015 |



## Imron® 3.5 HG + High Gloss Polyurethane Topcoat (RH Quality)



### GENERAL

#### DESCRIPTION

A high gloss 3.5 lbs/gal VOC conforming, low HAPS, polyurethane topcoat based upon unique Axalta formulations and resin technology. The resulting finish product provides a brush, roll or sprayable topcoat designed for use in any environment where long term color and gloss retention are desired.

#### SUGGESTED USES

As a high performance topcoat over suitable primers or properly prepared steel, galvanized steel, stainless steel, aluminum, concrete, concrete block, fiberglass, plastics and wood where:

- Long term color retention is desired
- Long term gloss retention is desired
- Compliance with 3.5 lbs VOC regulations is desired
- Use in corrosive or industrial marine environments is needed
- Application by brush, roll or spray is desired
- Excellent chemical resistance is desired
- Outstanding flexibility is needed
- Faster dry times are desired

#### COMPATIBILITY WITH OTHER COATINGS

- Aged Imron 3.5 HG + may be re-coated with itself following washing with clean, fresh water – no mechanical surface preparation is required.
- Imron 3.5 HG + can be applied over other Axalta coatings including, but not limited to Imron Industrial Strength primers and other Imron primers, Imron waterborne polyurethane copolymer coatings, Corlar® epoxies, Tufcote® acrylics, and Tufcote alkyd primers.
- Imron 3.5 HG + may be used over most aged and hard-cured coatings in good condition. Testing for lifting, bubbling and adhesion is recommended to assure compatibility with unknown coatings. Contact your Axalta representative for specific recommendations.

#### NOT RECOMMENDED FOR

Immersion service or floors

#### PERFORMANCE PROPERTIES

|                         |           |
|-------------------------|-----------|
| Abrasion & Mechanical   | Excellent |
| Alkalis                 | Excellent |
| Humidity                | Excellent |
| Solvents                | Excellent |
| Color & Gloss Retention | Excellent |
| Acids                   | Excellent |
| Salts                   | Excellent |
| Weather                 | Excellent |

The products referenced herein may not be sold in your market. Please consult your distributor for product availability.

#### COLOR

Imron 3.5 HG + consists of a mixing system utilizing 19 tints and 1 binder (3500P™) to specific mixing formulas. Select high-volume factory package colors are also available. Thousands of custom colors can be mixed.